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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,533	02/17/2004	Koshi Hatakeyama	1232-5286	2432
27123	7590	01/03/2006	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			SEVER, ANDREW T	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/781,533	Applicant(s) HATAKEYAMA ET AL.	
	Examiner Andrew T. Sever	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 8-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 10/13/2005 fails to completely comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein that did not include a legible copy of each cited foreign patent document or non-patent literature publication has not been considered (the remaining documents that did meet the requirement have been considered as noted.)

The English abstract of WO 95/20774 was not present, it appears that applicant meant to cite the English abstract of WO 97/01787 which was present and accordingly considered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, 5, and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deter et al. (US 5,822,022) in view of Baba et al. (US 6,626,542.)

Deter teaches in figure 1 a scan type display optical system comprising:

An optical scanning device, which rotates to deflect and scan light (40);

A mechanism which supports and rotates the optical scanning device (inherent for example part 40 shows two bars that would form an axle which as those with ordinary skill in the art would recognize, these axles would be attached to a motor that would inherently have to be mounted somehow to support them (mirrors and motors do not have the ability to levitate in mid air) see US 6,351,324 to Flint which in figure 2 teaches a mechanism for supporting mirrors (254 and 240)); and

A projection optical system (34), wherein

An incidence range of the deflected and scanned light to a first optical surface on which the light is incident initial out of the plurality of optical surfaces is variable by rotating the optical scanning device through the mechanism (this is how scanning optical systems inherently work, they scan an image across a optical surface by changing the incidence range; see columns 1 and 2 starting at line 55 of column 1.)

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Deter teaches a refractive projection optical system rather than an at least partially reflective system. Baba et al. teaches such a system in figures 1-5 (different embodiments). Baba teaches in column 2 lines 35-52 that reflection type projection optical systems have the advantage over refractive system as taught by Deter in that they have less distortion and chromatic aberration. They are also cheaper/easier to make. Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a reflective projection optical system in the scan type display optical system of Deter as taught by Baba in which the plurality of optical surfaces making up the reflective projection optical system as taught by Baba would project the light deflected and scanned by the optical scanning device as taught by Deter as such a projection system (that taught by Baba) is cheaper/easier to make than that taught by Deter.

With regards to applicant's claim 2:

See above.

With regards to applicant's claim 4:

As can be seen in figure 1 of Deter the rotating optical member which is the optical scanning member (40) as is claimed in applicant's claim 5, rotates the incidence light about an entrance pupil of the projection optical system (the entrance pupil is the scare outline on the projection lens.)

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With regards to applicant's claim 5:

See above with regards to applicant's claim 1.

With regards to applicant's claim 8:

Baba teaches curved surfaces making up the reflective surface.

With regards to applicant's claim 9:

See column 2 line 20-28 of Baba which teaches that the reflective surface have rotationally asymmetric aspheric shape (a free-form is not spherical so it is therefore aspherical.)

With regards to applicant's claim 10:

Deter teaches a second mirror (38) for deflecting the light in a direction orthogonal to the first direction.

With regards to applicant's claims 11 and 12:

See column 7 line 55 through column 8 line 28 of Deter.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 2, 4, 5, and 8-12 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,626,541 in view of Deter et al. (US 5,822,022).

Claim 1 of the '541 patent claims a projection display optical system comprising reflective surfaces which are asymmetrical rotational reflecting surface having curvatures, however the '541 patent does not claim what kind of light engine produces the light to be projected by the projection system. As described above, Deter teaches a scan type display optical system (see above for details of that system.) Deter teaches in column 1 lines 55 through column 2 line 20 that the raster scanning laser display system of Deter has advantageous over other prior art display system such as LCDs in that it can use a variety of different standards without degrading the image quality or resolution. Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a video display system of the scan type as taught by Deter with the projection optical system of claim 1 of the '541 patent.

Response to Arguments

6. Applicant's arguments filed 10/13/2005 have been fully considered but they are not persuasive.

Applicant argues that the new claim language of support mechanism reads over the Deter reference. Although Deter does not specifically teach a support mechanism, as is now outlined in the above 35 USC § 103 rejection based on Deter in view of Baba, a support mechanism is well known (as demonstrated by the Flint reference) and inherent.

Applicant is simply claiming that a spinning mirror is attached to a motor, which spins it, which is inherent. Accordingly applicant's arguments are found to not be persuasive and the rejections have been made final. (All of applicant's arguments are based on the above argument which is found to be not persuasive.)

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 6,577,429 to Kurtz et al. which teaches in figure 1 a projection device that scans across a display surface.

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US 2004/0036984 to Nakamura teaches in figure 5 a scanning system also using reflective optics prior to the scanning mirror.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "W B Perkey", with a long horizontal stroke extending from the end.

AS

William Perkey
Primary Examiner